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NOTEWORTHY COLLECTION OF *PAPAVER RHOEAS* FROM INDIANA

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ABSTRACT

A new county record of *Papaver rhoeas* is reported in Allen County, Indiana. Voucher specimens have been deposited in the Indiana University-Purdue University Fort Wayne herbarium. Due to the location, a protected mesic prairie under active management, and the increasing number of county records in Indiana, there may be concern regarding this species collection.

Specimens of *Papaver rhoeas* L. (Papaveraceae) were collected in Allen County, Indiana, within Eagle Marsh Nature Preserve, which is protected and managed by Little River Wetlands Project (LRWP). Much of the property under LRWP management has undergone extensive activities to promote establishment of native plants within wet to mesic prairies, in addition to native tree and shrub plantings in drier areas (Cunningham et al. 2014). While the occurrence of *P. rhoeas* may be relatively rare, the number of encounters have increased recently in Indiana. The collection of this species in Allen County, is of importance due to the managed area it was found, which is dominated by native species, and because it is a new county record of occurrence.

Papaver rhoeas has a spotty distribution across much of North America (Gleason & Cronquist 1991; Kartesz 2014). In Indiana specifically, its occurrrence has been cited in five counties in the southern portion of the state (Jackson, Lawrence, Perry, Pike, and Ripley), as well as two counties in the far north (LaGrange and St. Joseph) (Kartesz 2014). Other county records missing from distribution descriptions include Henry and Jasper counties (Ruch et al. 2002; Overlease & Overlease 2007). Deam (1940) mentioned *P. rhoeas*, implying it was minor in occurrence in Indiana without listing any county locations; likely escaped from gardens similar to locations in southern Michigan (Nieuwland 1914). However, other exhaustive lists of Indiana plants omit *P. rhoeas* (Crovello et al. 1983). A recent bioblitz of Eagle Marsh Nature Preserve occurred on 31 May 2014 in an effort to identify all biota within the property, but *P. rhoeas* was not encountered (unpublished data).

Voucher specimens. **Indiana**. Allen Co.: Eagle Marsh Nature Preserve, near the boundary of the preserve neighboring a paved bike path, 41°02.24' N, 85°14.30' W, 14 Sep 2014, *Marshall LRWP001, LRWP002, LRWP003* (Indiana University-Purdue University Fort Wayne Herbarium).

At the collection locality, three groupings of plants were found approximately 10-15 m apart with 6-10 individuals in each group. While each plant had slight variations in the typical characteristics found in *Papaver rhoeas* flowers (Fig. 1) — they all produced peduncles with spreading-hispid pubescence and a glabrous subglobose capsule. These characteristics separate *P. rhoeas* from *P. dubium* L., which has a much more obovoid capsule and appressed pubescence, and from *P. somniferum* L., the stem of which is glabrous (Gleason & Cronquist 1991; Kiger & Murray 1997).

Much of the work investigating the invasion potential of *Papaver rhoeas* has occurred in Europe (e.g., Chancellor 1985; Guillerm et al. 1990). While *P. rhoeas* is often described as being

Figure 1. *Papaver rhoeas*. (A) Typical floral characteristics: blue anthers and dark spots at base of petals. (B) Common variant lacking typical dark spot.

limited to waste areas (Voss 1985), there is potential for it to have an impact in agriculture (Wilson & Wright 1990; Wilson et al. 1995). Eagle Marsh Nature Preserve is actively managed, typically with fire and mowing (personal observations). While such disturbances could potentially provide pathways for *P. rhoeas* to colonize farther into the property, there is evidence that it is a fairly poor competitor compared to other annual plants (Goldberg & Fleetwood 1987; Torra & Recasens 2008). Unfortunately, the combinations of seed bank development in mesic soils with intermittent disturbance, including mowing and fire, may provide suitable habitat for *P. rhoeas* invasion and competition (Baskin et al. 2002; Trabaud 2002; Cirujeda et al. 2006; Ellenberg & Leuschner 2010).

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